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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,238	07/22/2003	Stefan Zimmer	Hawe-51-107	7560
26875	7590	06/28/2005	EXAMINER	
WOOD, HERRON & EVANS, LLP 2700 CAREW TOWER 441 VINE STREET CINCINNATI, OH 45202			COLE, LAURA C	
			ART UNIT	PAPER NUMBER
			1744	

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/624,238

**Applicant(s)**

ZIMMER, STEFAN

**Examiner**

Laura C. Cole

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 4,5 and 9-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4,5 and 9-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 15 June 2005 has been entered.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
2. Claims 4-5 and 9-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Fattori et al., USPN 6,347,425 in view of Weihrauch, 5,974,619.

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Fattori et al. discloses obtaining a dental brush having bristles disposed in an annular arrangement (see Figures 1-2), the brush devoid of bristles interiorly of the annular bristle arrangement in order to hold a quantity of toothpaste (Column 3 Lines 56-59; see Figures), the bristles having lengths that decrease in a direction from an external radius of the arrangement toward a center of the bristle arrangement (see Figures 3-5), engaging a convex tooth with the bristles and applying a prophylactic paste (or toothpaste, as prophylactic is defined as "acting to defend against or prevent something, especially disease; protective" according to *The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2000 by Houghton Mifflin Company*), to the bristles (Column 3 Lines 51-61). Fattori et al. disclose a dental brush having a brush head (16), a plurality of bristles (30) arranged in an annular pattern defined by inner and outer peripheral borders (see Figure 1, two rows of tufts forming inner and outer peripheral borders), the bristles having an inner end mounted to the brush head (see Figure 3) and an outer tip (uppermost portion of bristles "30" as shown in Figure 3), the tips collectively defining an annular concave surface wherein the bristles decrease in length from the outer peripheral border toward the inner peripheral border (see Figures 3-5), the brush head being devoid of bristles interiorly of the inner peripheral border of the annular pattern (see Figure 3; Column 3 Lines 56-59). Fattori et al. discloses the bristles being in tufts and does not disclose that the bristles are uniformly spaced.

Weihsrauch discloses a brush having individually uniformly spaced bristles (Figure 1) so that the brush, after being used, can dry easier and will not promote the growth of

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bacteria or the inclusion of contaminants (Column 2 Lines 35-43). Weihrauch discloses that the bristles may be made from polyamides or polyesters, which are capable of being thermally resistant (Column 3 Lines 11-15). Also, Weihrauch provides bristles that comprise abrasive materials (Column 3 Lines 44-56).

It would have been obvious for one of ordinary skill in the art to substitute the tufts of bristles of Fattori et al. for individually spaced bristles, such as Weihrauch teaches, so that the bristles of the toothbrush do not promote the growth of bacteria or trap harmful contaminants that are counter-productive to teeth cleaning.

3. Claims 9-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al., 5,996,157 in view of Fattori et al., USPN 6,347,425.

Smith et al. disclose the claimed invention including a dental brush comprising a bristle field (see bristles of Figure 7) having bristles uniformly spaced and arranged in an annular arrangement (see Figures 5 and 7), the bristles having an inner end mounted to the brush head and an outer tip, the tips defining a concave surface wherein the bristles decrease in length from the outer periphery inward (see Figures 5 and 7). The toothbrush is inherently used for brushing/cleaning teeth (as it is a "toothbrush", toothbrush defined as "A brush used for cleaning teeth" by *The American Heritage® Dictionary of the English Language, Fourth Edition* Copyright © 2000 by Houghton Mifflin Company.) Smith et al. includes a method of obtaining a dental instrument such as the one mentioned above, engaging the convex surface of the tooth with the bristles of the brush, and actuating the brush for rotary movement (Column 1 Lines 33-54,

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Column 3 Lines 21-27). Smith et al. does not disclose that the brush is devoid of bristles interiorly of the annular bristle arrangement.

Fattori et al. disclose all elements above, including that the brush head is devoid of bristles interiorly of the annular bristle arrangement in order to hold a quantity of toothpaste or to conform to the contours of teeth (Column 3 Lines 56-59; see Figures).

It would have been obvious for one of ordinary skill in the art to modify the bristle arrangement of Smith et al. to make the center interior portion devoid of bristles, as Fattori et al. teach, in order to provide a region within the bristles where toothpaste is easily held to distribute to the teeth that are being cleaned.

#### ***Applicant's Arguments***

4. In the response filed 26 April 2005, the Applicant contends that:

Fattori et al. does not include individual bristles in a uniformly spaced annular pattern. Smith et al. shows bristles that are individually spaced, however do not have an annular pattern that is devoid of bristles interiorly of the annular pattern.

#### ***Response to Arguments***

5. Applicant's arguments with respect to claims 4-5 and 9-12 have been considered but are moot in view of the new ground(s) of rejection of Fattori et al. in view of Weihrauch and Smith et al. in view of Fattori et al.

#### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura C. Cole whose telephone number is (571) 272-

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1272. The examiner can normally be reached on Monday-Thursday, 7:30am - 5pm, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Kim can be reached on (571) 272-1142. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LCC

23 June 2005



MARK SPISICH  
PRIMARY EXAMINER  
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1706